Biological Evaluation & Fish & Wildlife Project Level Analysis

The intent of this document is to meet the Endangered Species Act (ESA) requirements, Executive Order 13186 (Migratory Birds and Bird Species of Concern) and Migratory Bird Treaty Act, Forest Service Manual (FSM) direction, and the analysis requirements for the National Environmental Policy Act. In compliance with FSM, the effects of the proposed action to "Former" management indicator species (MIS) and threatened, endangered, proposed or sensitive species will be assessed. In addition, Forest Plan requirements, goals and objectives for these species will be met at the project level (FSM 2621.3, 2621.4 and 2672.4). The Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) do not list any species as proposed but they have designated species as candidate. Therefore, this document will address threatened, endangered, and sensitive (TES) and candidate species that are likely to occur in and around the Tongass National Forest. This document also provides a description of the proposed action and discloses the direct, indirect, and cumulative effects of this action on Former MIS, TES and candidate species, migratory birds, subsistence resources, and essential fish habitat. To meet the requirements for Biological Evaluation as described in the ESA and FSM, this document tiers to the "Fish and Wildlife Resource Report" which provides additional information on current management direction, desired conditions and the affected environment for species addressed.

Proposed Project

Project Name: Sitkoh Lake trail Reconstruction
Date: 12/1/2017
Land Use Designations (LUDs): Old-growth Habitat; Semi-Remote Recreation
List CE Category or state if supporting EA: CE 36 CFR 220.6(e)(1); Construction and Reconstruction of trails.
Project Location (Attach Map): SRD, T 51 S, R 65 E, Sections 19, 20, 21, 22
Will project activities alter habitat or effect TES, candidate, or other species? (Underline correct response) YES — Complete the Description of Proposed Project and Analysis Area, provide an explanation in the Effects Analysis section, and update Table 1 and Management Measures and Consultation as needed. **NO** — Complete the Description of Proposed Project and Analysis Area, review Table 1 and update if needed, and Sign and Date the end of the document.

Description of Proposed Project and Analysis Area

Description of Proposed Action (Define where, when, how and why):
Reconstruct the entire length of trail from saltwater to the Sitkoh Lake (East) recreation cabin. Overall, the trail grade is very gradual, rising from sea level at Sitkoh Bay to approximately 200 feet at Sitkoh Lake. Average finished trail width will be 24 inches and comprised of imported aggregate, dimensional lumber boardwalk and native substrate where suitable. Grade reversals and outsloping will be incorporated where appropriate to move water off the tread. In addition, drainage structures such as ditching and open drains will be constructed to ensure that water flows off the trail and does not puddle or create muddy areas. No culverts will be used. Three

native log trail bridges will be replaced in-kind. In muskeg areas, aggregate and step-and-run boardwalk will be used, and in the grass/sedge areas along the lake, raised boardwalk will predominate. An approximately ¼ mile non-system trail connecting the Sitkoh Lake trail with USFS system road 75443 will be improved with a combination of aggregate surfacing and step-and-run boardwalk.

It is anticipated reconstruction will occur in phases over multiple years beginning in 2020. No major reroutes are planned so vegetation and soil disturbance will be minimal. A handful of trees will be felled for trail structures. The work will be completed primarily with contract crews, but force account crews may be used on limited trail segments. Construction supplies will likely be barged to the LTF in Sitkoh Bay then slung by helicopter to the trail. Relatively small types of motorized equipment such as mini excavators and walk behind gravel dumpers may be used on the project. There is potential for blasting near the Sitkoh Bay end of the trail on Sealaska land. An existing 25 foot wide trail easement is in place for this private land segment.

Much of the trail is currently in very poor condition, and as a result, the SRD has capped Outfitter/Guide use of the trail until measures are taken to create a sustainable route. Over the last ten years, the trail has averaged about 150 guided client days per year. Reconstruction of the trail will allow for a significant expansion of guided use.

Description of Analysis Area (Define the boundaries of and the habitat present within analysis area and the time period analyzed):
The analysis boundary for this project included a half mile buffer on both sides of the trail. This includes Sitkoh Creek, approximate 3.5 miles, and all streams within the half mile buffer. The marine environment includes a few hundred yards adjacent to the mouth of the outlet of Sitkoh Creek. Within the analysis boundary there is varies level of productive old-growth, from low to highly productive old-growth and muskegs and wetlands. The time period of analysis for direct and indirect effects includes the 4 years estimated to complete the trail work. The time period of analysis for cumulative effects is indefinite and spans the life of the trail.

Concern to Resource: (Provide a brief description of the concern to resource):

- Displacement of individuals within local populations
- Avoidance behavior during project construction and after construction is completed
- Increase likelihood of negative bear encounters
- Loss of wildlife habitat

Surveys or Site Visits Completed:
Site visit was conducted in June of 2017.

Effects Analysis

Table 1 summarizes the effects of the proposed activities on TES and candidate species, Former MIS and other species that may occur in the analysis area. The Effects Analysis assesses the direct, indirect and cumulative effects of the proposed action on fish and wildlife resources in the analysis area. Direct and indirect effects can occur as a result of project activities and their connected actions. A direct effect is an effect caused by an action that occurs in the same time and place as the action. An indirect effect is caused by an action but is later in time or farther removed in distance, but is still reasonably foreseeable. Under NEPA, cumulative effects represent the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects for ESA compliance, and therefore considered in the analysis of TES species, include the effects of future State or Private activities but not other Federal activities because those actions are subject to future consultation" (50 CFR 402.02).

I based effects analyses on professional judgment using information provided by forest staff, relevant references and technical literature citations, and subject matter experts. Using technical reports from the published literature that described the most susceptible aspects of species life cycle and/or habitat needs as a guide, I gathered quantitative and qualitative information regarding the presence and status of these species within the analysis area. I contacted knowledgeable scientists and ecologists on the forest staff, Alaska Department of Fish and Game (ADFG), U.S. Fish and Wildlife Service (FWS), and the State Division of Natural Resources (DNR) as necessary for unpublished information and professional judgments regarding the status of species, habitats, special habitat features, and old-growth reserve development.

I developed general criteria to assess the intensity or level of influence of the effects. Where applicable, I defined mitigation measures to offset or minimize potential adverse impacts. Levels of influence definitions are located in the Fish and Wildlife Report.

This analysis also considered effects to the old-growth reserve system as designated in the Forest Plan. There would be negligible effects on the old-growth reserve system because activities would not occur within non-development land use designations (LUD), change non-development LUD boundaries (minor modifications to old-growth LUD boundaries as a result of precise mapping are considered a “correction in map errata”), and/or reduce the total amount of productive old-growth (POG) habitat acres within non-development LUDs.

Table 1. Summary of effects of the proposed activities to species that occur or are more likely to occur on the Tongass National Forest or in adjacent waters.

Species/Issue	Presence		Direct, indirect and Cumulative Effects	
	Species Present in Analysis Area[1]	Species Habitat Present in Analysis Area	Level of Influence[2/] Determination	Reason for Determination/ Level of Influence
Threatened and Endangered[3]				
Short-tailed Albatross	No	No	No Effect	Would not increase marine disturbance that would alter foraging behavior
Humpback Whale Mexico DPS	Yes	Yes	No Effect	Would not increase marine disturbance or alter habitat that could affect streams or the marine environment.
Fin Whale	No	No	No Effect	Would not increase marine disturbance
Sperm Whale	No	No	No Effect	Would not increase marine disturbance
Steller Sea Lion Western DPS	Yes	Yes	No Effect	Would not increase marine disturbance or alter habitat that could affect streams, the marine environment, or haul outs or rookeries.
Fish Species[4]	No	Yes	No Effect	Would not increase marine disturbance or alter habitat that could affect the marine environment.
Critical Habitat				
Steller Sea Lion	No	No	No Effect	Would not alter habitat
Sensitive				
Aleutian Tern	No	No	No Impacts	Would not reduce or alter shoreline habitat.
Black Oystercatcher	No	No	No Impacts	Would not reduce or alter shoreline habitat.
Dusky Canada goose	No	No	No Impacts	Would not reduce or alter wetland habitat
Kittlitz's Murrelet	No	No	No Impacts	Would not alter recently deglaciated areas, scree slopes or shoreline habitat.
Queen Charlotte Goshawk	No	Yes	No Impacts	Would not alter productive old-growth habitat.
Former Management Indicator Species				
Alexander Archipelago Wolf	No	No	NA	Not present in the analysis area
American Marten	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest.
Bald Eagle	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest in coastal areas.
Black Bear	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest or riparian areas.
Brown Bear	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest or riparian areas. Potential avoidance behavior and displacement. Increase likelihood of negative bear encounters. See Notes/Further Analysis for more detail.
Brown Creeper	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest.
Hairy Woodpecker	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest.
Mountain Goat	No	No	NA	Not present in the analysis area
Red-breasted Sapsucker	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest.

Species/Issue	Presence		Direct, indirect and Cumulative Effects	
	Species Present in Analysis Area[1]	Species Habitat Present in Analysis Area	Level of Influence[2/] Determination	Reason for Determination/ Level of Influence
Red Squirrel	Yes	Yes	Negligible	Would not reduce or alter young growth or productive old-growth forest.
River Otter	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest along coastal, estuary or riparian areas.
Sitka Black-tailed Deer	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest.
Vancouver Canada Goose	Yes	Yes	Negligible	Would not reduce or alter productive old-growth forest along coastal, estuary or riparian areas.
Pink Salmon	Yes	Yes	Negligible	Would not reduce or alter streams, wetlands or riparian areas.
Coho Salmon	Yes	Yes	Negligible	Would not reduce or alter streams, wetlands or riparian areas.
Dolly Varden Char	Yes	Yes	Negligible	Would not reduce or alter streams, wetlands or riparian areas.
Cutthroat Trout	Yes	Yes	Negligible	Would not reduce or alter streams, wetlands or riparian areas.
Other				
Migratory Birds	Yes	Yes	Minor	Would not reduce or alter productive old-growth forest, or any other terrestrial habitats.
Essential Fish Habitat (EFH) Determination				
Fish Habitat	Yes	Yes	No adverse Effects	There would be No Adverse Effects on freshwater or marine EFH because the proposal will not impact fish habitat and no effects would be transported to the marine environment during activities associated with this project. See mitigation section for further details.

[1] "Yes" if the species is known or is likely to occur in the analysis area or in marine waters adjacent to the analysis area. "No" if the species has not been documented or is not likely to occur in the analysis area.

[2] Level of influence of the effects for management indicator species includes "negligible", "minor", "moderate", or "major". Levels of influence are defined in the "Fish and Wildlife Resource Report". Determinations are only required for listed and sensitive species. Determinations for threatened and endangered species include "no effect", "not likely to adversely affect", or "likely to adversely affect" (Bosch 2004). Determinations for candidate species include "no effects", "not likely to jeopardize proposed species, or adversely modify proposed critical habitat", or "likely to jeopardize proposed species, or adversely modify proposed critical habitat". Determinations for sensitive species include "no impacts", "beneficial impacts", "may impact individuals but not likely to cause a trend to federal listing or a loss of viability", or "likely to result in a trend to federal listing or a loss of viability" (Bosch 2004).

[3] There will be negligible/no effect to other listed or candidate species because these species do not or rarely occur and/or key habitats are not present in or around the analysis area.

[4] All-inclusive of the 14 stocks of listed anadromous fish that could occur in Southeast Alaskan waters during their life cycle. The list include: green sturgeon (southern), Chinook salmon (Upper/Lower Columbia, Puget Sound, Spring/Summer/Fall Snake River, and Upper Willamette River), Sockeye Salmon (Snake River), Coho Salmon (Lower Columbia River), Chum Salmon (Summer Hood Canal), and Steelhead (Lower/Upper/Middle Columbia River, Snake River Basin, and Upper Willamette River).

Notes/Further Analysis

Effects Common To All Species

The Forest Plan contains a comprehensive conservation strategy using a system of Old-growth LUDs designed to provide old-growth habitats in combination with other non-development LUDs to maintain viable populations of native and desired non-native fish and wildlife species and subspecies that may be associated with old-growth forests (USDA 2016b, p. 3-183). This strategy, in addition to the implementation of Forest Plan standards and guidelines, was developed to maintain species viability. The application of the Forest Plan standards and guidelines (USDA 2016a, pp. 4-85 to 4-98) is integral to protecting and providing habitat to maintain viable fish and wildlife populations. Population viability would be maintained for all species addressed in this document because the proposed action is consistent with the Forest Plan conservation strategy and would implement Forest Plan standards and guidelines.

This project is expected to have several effects on local wildlife species during project activities and after completion. Although the reconstruction will primary occur in its existing footprint there will be small sections of the trail that will be relocated which could potentially lead to the loss of wildlife habitat. Additionally during project activities a few individuals may be disturbed and/or displaced. Some smaller individuals (e.g. birds and red squirrels) might be permanently displaced and a few incidents of take (mortality) could occur. However the level of habitat loss and displacement will be negligible (see below Effects and Determinations section for more detail). The project area is surround by plenty of suitable habitat and species populations in the project area are considered healthy and robust and can withstand the take of a few individuals.

The increase presents of humans in the project area after the project is completed will lead to higher frequency human/wildlife encounters. In most cases these encounters will cause a brief disturbance leading to displacement of individuals (i.e. deer and bear). A few individuals might start to exhibit an avoidance behavior to the project area. However, because of the short duration and infrequency of these encounters and the availability of suitable habitat surrounding the area there will be no effect to individual health and fitness and negligible effect to individuals and populations. However, with the increase in human/wildlife encounters there is will also be an increase in the potential for negative human/bear encounters (see Effects and Determination and Mitigations measures for further detail).

Effects and Determinations

Bald Eagles
This project is consistent with the Forest Plan and interagency agreement and should not detrimentally affect bald eagle viability. The work activities will primarily occur in an existing footprint with a potential of a few sections of the trail being rerouted at short distance from their previous locations. The project activities does propose the potential for some small scale blasting to occur on a section of the trail located close to Sitkoh Bay. The GIS database indicates there are no known nest sites in the project analysis area, however if blasting is to occur mitigation measure will be implemented to avoid any potential effects to bald eagles (see Mitigation Measure for further details). Additionally, during project activities if any nesting bald eagle are identified in the analysis area the district biologist will be notified and additional mitigation will be implemented, if needed. No effects to bald eagles would occur with implementation of the proposed activities.

Brown Bear
The proposed action will displace some individual bears and potentially cause some avoidance of the project area. Although activities may displace bears locally, due to the abundance of high quality of habitat surrounding the project area, effects to individual bears and populations in the project area will be negligible. Once the trail work is completed use access will most likely intensify leading to an increase chance of a negative human/bear interaction. Human/bear interactions are possible anytime people are in the woods, however brown bears generally avoid interactions with people unless defending food, or if a sow has cubs in the area (see Mitigation Measure for further details).

Goshawks
The Tongass NF GIS and NRIS database show no goshawk nests within or near the project area. Although GIS data shows that part of the trail runs through productive old-growth a site visit was conducted in the June of 2017 to confirm the potential for a nest. It was determine the likelihood of a nest in that area was low, however several broadcast call were made with no response. The fact that work will be conducted in an existing footprint, or very close to the original footprint, and scale of the project and the quality of the habitat (mostly medium to low productive forest and muskegs) limits the potential for impacts to nesting goshawks. There will no impact on individuals or populations of goshawks. In the event that any goshawk nests are identified in the project area, or within 600 feet of the units, the district biologist will be notified immediately and appropriate mitigation measures will be implemented to adhere to the standards and guidelines identified in the Forest Plan.

Sitka Black-tailed Deer
The proposed action will displace some individual deer and potentially cause some avoidance of the project area. Although activities may displace deer locally due to the abundance of high quality of habitat surrounding the project area, effects to individual deer and populations in the project area will be negligible.

Migratory Birds
Although most of the trail reconstruction will occur in its original footprint there are a few sections of the trail that will be rerouted. These rerouted sections could lead to the loss of nesting habitat (i.e. trees and shrubs). Additionally due to the fact that the project construction will span late-spring through early-fall seasons it is likely that some take will occur in the form of egg and juvenile loss. Permanent displacement of adults will also occur. However, due to the abundance of high quality nesting habitat surrounding the project area and that populations in the area are considered healthy, the project construction will have minor effects with the take of a few individuals (i.e. mortalities due to nest loss) but will have negligible effects on populations.

Mitigation Measures

If any previously undiscovered endangered, threatened, candidate or sensitive species or key habitats for any former MIS or other species identified in this document are encountered at any point in time prior to or during the implementation of this project, or the district biologist would be consulted and appropriate measures would be enacted.

Blasting Mitigations
EFH
To prevent any potential disturbance to EFH if and when blasting is to occur near any class I or II stream blasting mats will be used to keep the shots localize. Additionally when acceptable blasting

shot will be set up to limit the level of debris thrown voiding the need for blasting mats.

Bald Eagles
Although no known nest have been documented or found in the project analysis area if and when blasting is conducted visual surveys will be conducted to make sure there are no active nest within a ½ mile radius. If any active nest are identified blasting events will be limited to outside the nesting window for raptors (March 1st – July 31st).

Human/Bear Interactions Mitigations
In order to mitigate the effects of increase user access due to the trail reconstruction the Forest Service will continue to require permitted outfitter/guides to carry a bear deterrent (i.e. bear spray). Additional mitigation measures, as listed in Appendix C of the Shoreline II Outfitter/Guide FEIS, will be incorporated in their permits. Based on within season and end of season interviews with outfitter/guides additional measure could also be developed (e.g. restricting group sizes, frequency of visits, and season closures).

Consultation and/or Contacts

ESA does not require consultation for "no effect" determinations. Therefore consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service to review the effects of this project on threatened, endangered and candidate species is not required.

Prepared By:

/s/ Chris Leeseberg 12/8/17

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Date

Figure 1. Vicinity map and trail location.

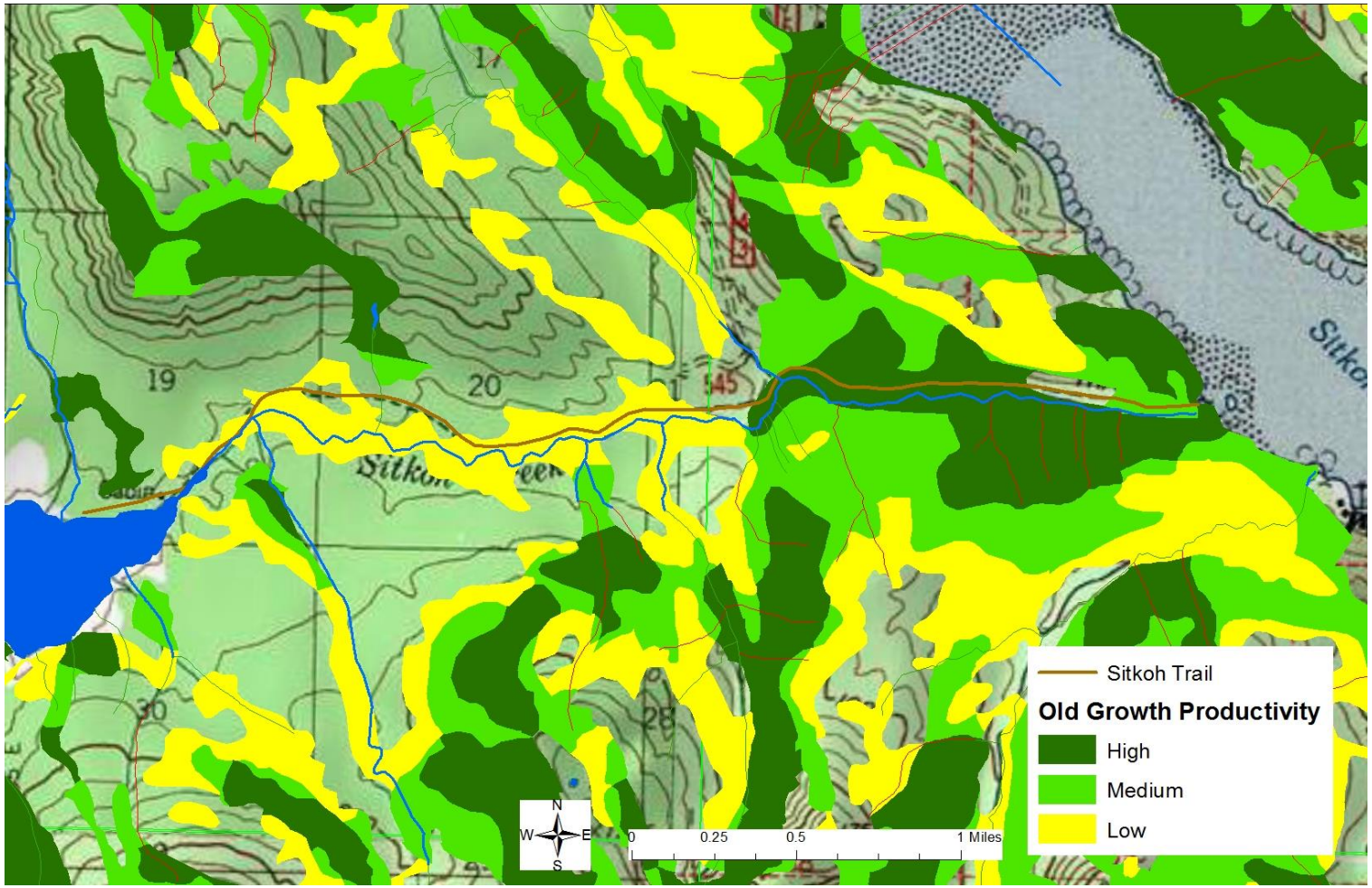

Figure 2. Trail and old-growth productivity.